

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1059537

Luminaire Tested: S123RDR-H1165D930-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059537
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-66)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1165D930-X4F0-XX-UDD-BVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

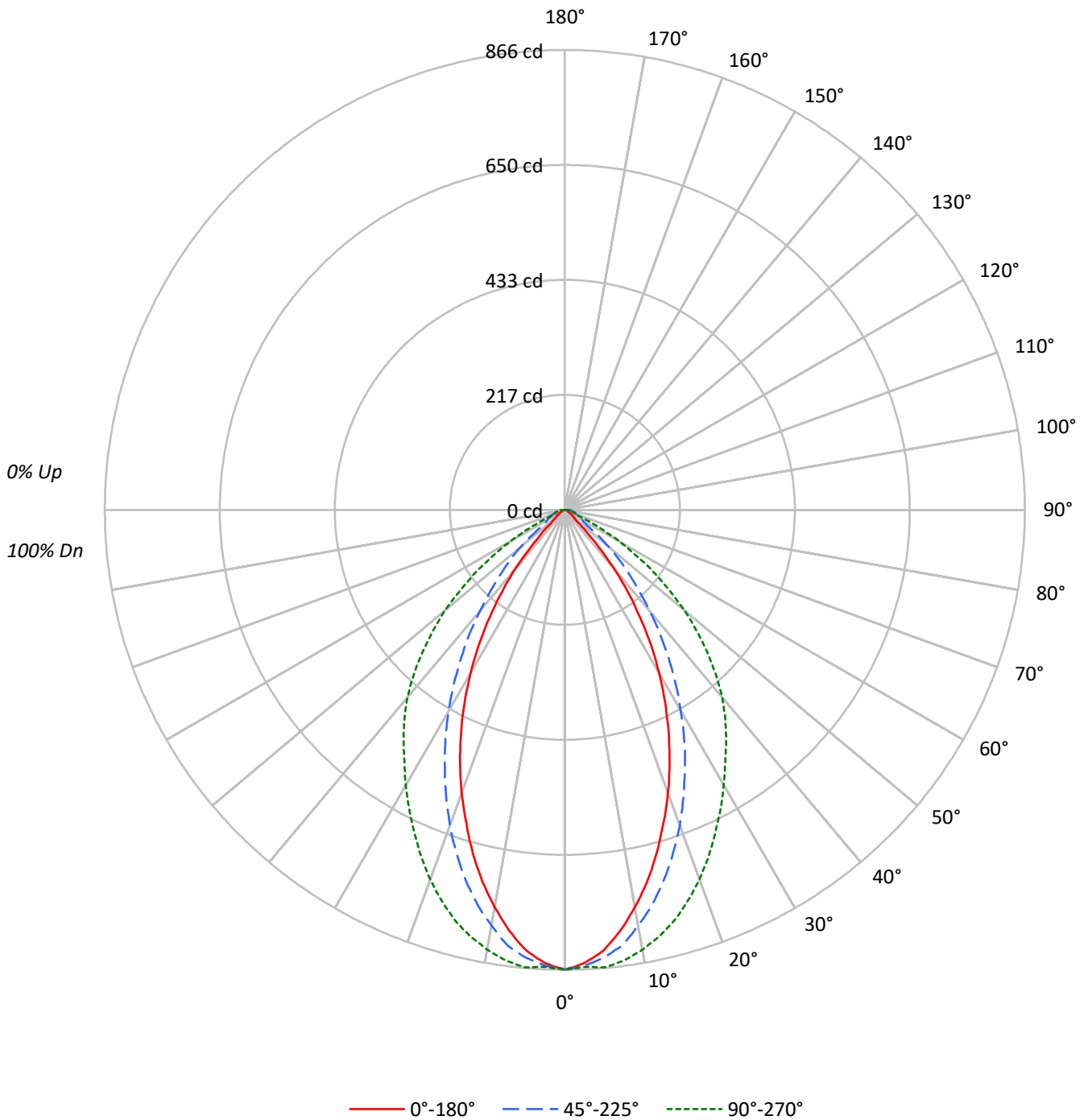
Lumens per Lamp: N/A
Luminaire Lumens: 1039.5 lumens
Efficiency: N/A
Efficacy: 28.5 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 36.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90
2	105	99	94	90	102	97	92	88	94	90	86	91	87	85	88	85	83	81
3	98	90	84	79	96	89	83	79	86	81	77	83	79	76	81	78	75	73
4	92	83	76	71	90	81	75	70	79	74	70	77	72	69	75	71	68	66
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55
7	76	65	58	53	75	65	58	53	63	57	53	62	56	52	61	56	52	50
8	72	61	54	49	70	60	53	49	59	53	49	58	52	48	57	52	48	47
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	42	40

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10167	10167	10167
5°	9816	9978	10192
10°	9062	9483	10025
15°	8133	8769	9723
20°	7094	7905	9256
25°	5985	6928	8682
30°	4813	5924	8115
35°	3524	4877	7585
40°	2198	3802	7063
45°	832	2835	6292
50°	395	1953	5362
55°	303	1071	4146
60°	214	909	2724
65°	158	789	1139
70°	158	742	742
75°	209	776	776
80°	311	926	845
85°	620	1536	1226

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 6292 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.5	7.6
10°-20°	203.8	19.6
20°-30°	252.3	24.3
30°-40°	226.2	21.8
40°-50°	148.3	14.3
50°-60°	74.2	7.1
60°-70°	28.9	2.8
70°-80°	16.3	1.6
80°-90°	10.1	1.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	535.6	51.5
0°-40°	761.7	73.3
0°-60°	984.2	94.7
0°-90°	1039.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1039.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	866	866	866	866	866	
5°	833	846	846	856	865	77
15°	669	696	721	769	800	186
25°	462	490	535	611	670	211
35°	246	279	340	443	529	153
45°	50	81	171	292	379	48
55°	15	18	52	143	202	14
65°	6	17	28	38	41	6
75°	5	17	17	17	17	5
85°	5	11	11	11	9	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	865.8	865.8	865.8	865.8	865.8
2.5°	854.4	867.0	859.0	860.1	861.3
5°	832.8	846.5	846.5	855.6	864.7
7.5°	799.8	815.8	827.1	843.1	855.6
10°	760.0	779.4	795.3	823.7	840.8
12.5°	716.8	740.7	761.2	798.7	822.6
15°	669.0	696.3	721.3	769.1	799.8
17.5°	617.8	645.1	678.1	733.8	771.4
20°	567.7	595.0	632.6	695.2	740.7
22.5°	515.4	543.8	583.7	653.1	706.5
25°	461.9	490.4	534.7	611.0	670.1
27.5°	408.5	436.9	487.0	570.0	634.9
30°	355.0	383.4	436.9	525.6	598.5
32.5°	301.5	332.2	388.0	484.7	562.0
35°	245.8	278.7	340.2	442.6	529.1
37.5°	194.6	225.3	294.7	406.2	496.1
40°	143.4	176.4	248.0	370.9	460.8
42.5°	93.3	128.6	205.9	332.2	421.0
45°	50.1	80.8	170.7	292.4	378.9
47.5°	27.3	44.4	137.7	250.3	335.6
50°	21.6	25.0	106.9	213.9	293.5
52.5°	18.2	20.5	76.2	179.8	246.9
55°	14.8	18.2	52.3	143.4	202.5
57.5°	12.5	15.9	41.0	111.5	158.1
60°	9.1	13.7	38.7	81.9	116.0
62.5°	6.8	14.8	34.1	56.9	76.2
65°	5.7	17.1	28.4	37.5	41.0
67.5°	4.6	18.2	25.0	23.9	23.9
70°	4.6	17.1	21.6	20.5	21.6
72.5°	4.6	18.2	19.3	18.2	19.3
75°	4.6	17.1	17.1	17.1	17.1
77.5°	4.6	15.9	15.9	14.8	14.8
80°	4.6	13.7	13.7	13.7	12.5
82.5°	4.6	12.5	12.5	12.5	10.2
85°	4.6	11.4	11.4	11.4	9.1
87.5°	3.4	10.2	11.4	10.2	6.8
90°	0.0	0.0	0.0	0.0	0.0



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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	0.40	1.66	0.77	1.97	2.29	14.66	15.92	15.03	16.23	16.54
	3H	2.75	3.86	3.13	4.19	4.56	14.74	15.85	15.12	16.18	16.55
	4H	3.86	4.90	4.27	5.25	5.63	14.82	15.85	15.22	16.20	16.59
	6H	4.86	5.81	5.27	6.18	6.57	14.92	15.87	15.34	16.24	16.64
	8H	5.34	6.24	5.78	6.63	7.04	14.98	15.88	15.41	16.27	16.68
	12H	5.91	6.77	6.34	7.15	7.58	15.06	15.92	15.50	16.30	16.73
4H	2H	3.65	4.69	4.06	5.04	5.42	14.52	15.55	14.92	15.90	16.29
	3H	5.98	6.83	6.39	7.23	7.63	14.69	15.54	15.11	15.94	16.35
	4H	7.36	8.11	7.79	8.53	8.98	14.84	15.60	15.28	16.02	16.46
	6H	8.45	9.10	8.91	9.55	10.02	15.07	15.72	15.53	16.17	16.64
	8H	8.91	9.52	9.38	9.97	10.44	15.19	15.80	15.66	16.25	16.72
	12H	9.41	9.94	9.89	10.43	10.90	15.37	15.90	15.85	16.39	16.86
8H	4H	8.33	8.94	8.80	9.39	9.86	14.84	15.45	15.31	15.90	16.37
	6H	9.86	10.35	10.36	10.85	11.33	15.18	15.68	15.68	16.18	16.66
	8H	10.63	11.08	11.15	11.60	12.09	15.41	15.86	15.93	16.38	16.87
	12H	11.44	11.84	11.95	12.33	12.90	15.75	16.14	16.26	16.64	17.21
12H	4H	8.51	9.05	8.99	9.53	10.00	14.83	15.36	15.31	15.85	16.32
	6H	10.17	10.62	10.69	11.14	11.63	15.20	15.65	15.72	16.16	16.66
	8H	11.13	11.52	11.64	12.02	12.59	15.51	15.91	16.02	16.40	16.97